

Application No.: 10/074,814
Amendment dated: April 7, 2004
Reply to Office Action of December 8, 2003

Remarks

Claims 19-21 are pending in this application. All have been rejected under 35 U.S.C. 102(b) as being anticipated by one or more of: Woo et al., Sherry, Robbins et al., and Gray et al.

Foam concentrate is normally mixed in proper ratios with water (typically anywhere from 1 part concentrate to 99 parts water at a low dilution ratio to perhaps 10 parts concentrate to 90 parts water at an upper dilution ratio) to make a foam solution. The foam solution is then aerated in some manner to produce a foam, which is applied as a foam blanket over a chemical spill to be treated. The foam is unstable and will eventually drain back into the foam solution state.

Woo, Sherry, Robbins and Gray each teach compositions for use in cleaning products, wherein the foam concentrates themselves have pH values that are either acidic or alkaline. Although these references may each teach a concentrate containing a foam-forming agent, a foam stabilization polymer and a non-aqueous solvent, wherein the foam concentrate itself has a non-neutral pH, none of these references teaches or suggests *an aqueous foam* comprising an aqueous foamable concentrate *foamed with non-neutral pH aqueous liquid*.

A distinction of Applicant's claimed invention is the fact the dilution water has either a high or low pH (acid or base value) that allows the claimed foam composition to be used to both scrub hazardous vapors (such as fuming acids or anhydrous ammonia) while at the same time effecting partial or total neutralization of the hazardous material that is giving off vapors. Foam concentrates such as those taught by the references that are either acidic or alkaline, when diluted with plain water, will not have a high enough acid or base value to scrub vapors or neutralize the spilled chemical beneath the foam blanket.

A key point is that the foam-forming composition is tolerant to high pH swings. The foam that is generated, using either acidic or alkaline dilution water (foam concentrate plus dilution water with a strong acid or strong base equals either an acidic or

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an alkaline foam solution) can be applied to a burning or vapor-releasing chemical spill by covering the spill with a thick blanket of the foam. The foam blanket acts as an insitu scrubber that blocks or substantially reduces the release of harmful vapors. In addition, as the foam blanket slowly breaks down and returns to the foam solution state, the liquid that drains from the foam blanket acts to neutralize the chemical that is giving off the vapors. This slow release of liquid from the foam blanket minimizes the effects of heat of solution and/or heat of neutralization. The heat of solution and neutralization can be controlled by careful selection of both the type and strength of acid or base to be mixed with the dilution water.

None of the references teaches or suggests, alone or in combination, *an aqueous foam* comprising an aqueous foamable concentrate *foamed with non-neutral pH aqueous liquid* a foam concentrate, as recited in claim 19, which has been amended only to correct a typographical error. Claim 19 should therefore be allowable. Allowance of dependent claims 20 and 21 should follow.

Applicant appreciates the Examiner's suggestions as to potential allowability, but respectfully declines to implement these suggestions at this time.

Applicant believes that the present application is in condition for allowance. A Notice of Allowance is respectfully solicited. Should any questions arise, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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